

Work Order ID 117798-1

May-05-14 8:00:28 AM

117798

Page 1

Item ID: D4934-041

Revision ID:

Item Name: Blade Assembly

Start Date: 5/05/14

Start Qty: 10.00

Required Date: 5/19/14

Req'd Qty: 10.00

Reference:

Accept

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan: MUS

Date: 14-05-05

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4934

A

110

Weld per dwg A/R Steel rod Batch: 119317

0.00

110

Large Fab

Memo

0.00

Large Fab

Clean with wash & wipe to remove oil

120

QC9- Inspect visual per QSI004- Fusion Welds

0.00

120

QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

VERIFY TENSILE STRENGTH AFTER WELDING AS PER DWG NOTE 8

14-08-02
JBL

DAS
50
9-89

DMS
9
9-89

Work Order ID 117798

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Page 2

Item ID: D4934-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Blade Assembly

Start Date: 5/05/14 Start Qty: 10.00

10

Cust Item ID:

Required Date: 5/19/14 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel

0.00

140

Powdercoat

Memo

0.00

MASK CARBIDE FACE PRIOR TO POWDERCOAT

START TIME: 12:00

OVEN TEMPERATURE: 160

FINISH TIME: 12:30

Powder Coating

10 0 14-8-3

DAS 34 9-89

150

QC3- Inspect Part Finish

0.00

150

QC

Memo

0.00

Quality Control

5 14-09-04

DAS 9 9-89

160

Identify as per dwg & Stock Location: 51537 0.00

160

Packaging

Memo

0.00

Packaging

5x DAS 28 9-89

SEP 05 2014

DQA:

Date: 14/09/18



QA Closed:

Date: 2014-9-16

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: 117798	DISPOSITION Rework <input checked="" type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS			
Part No. D4934-041		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
NCR No. 14-4245		Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input checked="" type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design				Markings found though the powder coat finish	DAS 16 9-89	Strain all powder coat as 12 022005	25 14-9-4	DAS 9 9-89	DAS 16 9-89
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator	14/09/18	12	5	Re Parts not clean thoroughly before powder coat.	Q2242 14/09/18	Clean Parts thoroughly w/ Acetone + Red solvent before powder coat as per 11/23/15.		14-09-04	Q2242 14/09/18
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input checked="" type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 117798

May-05-14 8:00:28 AM

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Page 3

Item ID: D4934-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Blade Assembly

Start Date: 5/05/14

Start Qty: 10.00

10

Cust Item ID:

Required Date: 5/19/14

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.00

Quality Control

MLJ

14-09-08

MLJ 14-09-05

Picklist Print

May-05-14 8:00:31 AM

Page 1

Work Order ID: 117798

117798

Parent Item: D4934-041

D4934-041

Parent Item Name: Blade Assembly

Start Date: 5/05/14

Required Date: 5/19/14

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 13.09.06 new issue DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2741-NP

Manufactured No

Each 0.0000

10

D2741-NP

Blade (No paint)

D4932-1-048

Manufactured No

Each 0.0000

10

D4932-1-048

KWS Carbide Wear Strip, 4.8" Long

14-08-29
JBL

14-08-29
JBL

117185

117791

117743

5

5

10

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

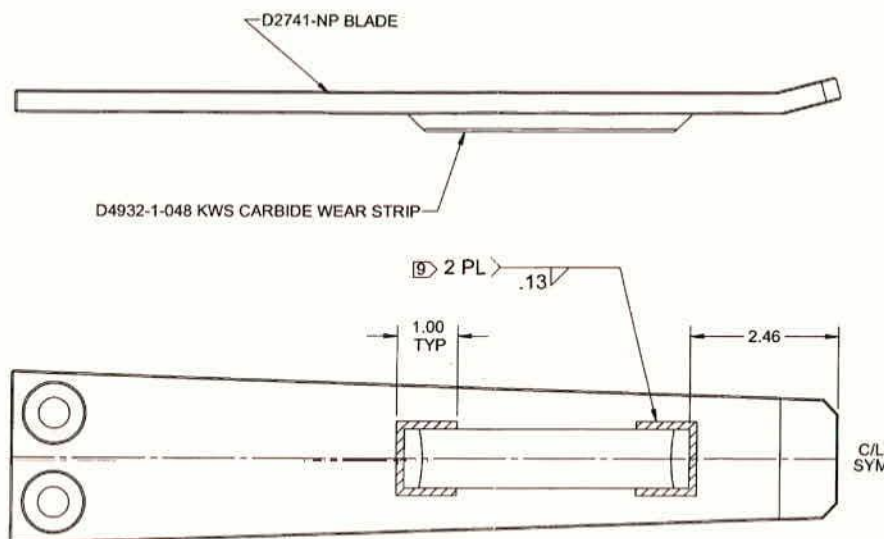
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

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ITEM	QTY -041	P/N	DESCRIPTION
	X	D4934-041	BLADE ASSY
1	1	D2741-NP	BLADE
2	1	D4932-1-048	KWS CARBIDE WEAR STRIP



D4934-041 BLADE ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "WHITE" PER DART QSI 005 4.3.5.2 (EXCEPT FOR CARBIDE FACE)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.030 TO 0.060 MAX
- 6) IDENTIFICATION: WITH DART P/N "D4934-041" PER DART QSI 044 METHOD 6.1
- 7) WEIGHT: 4.12 LBS
- 8) VERIFY TENSILE STRENGTH (AFTER WELDING) BY HARDNESS TEST PER ASTM E18 TO 34-40 HRC
- 9) WELDING: PER QSI 004

A	NEW ISSUE	DB	13.08.28
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	A.P.	DRAWING NO.	REV. A
MFG. APPR.		D4934	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		BLADE	NTS
DATE	13.08.28	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE LOANED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT DART AEROSPACE LTD'S WRITTEN PERMISSION EXCEPT AS SPECIFIED HEREIN	

RELEASED
2014-04-04

117798 MJS
140505

[9:16:08 AM] Linda Lacelle: hi Mike, the D4934 blades with the welded carbide strips...do they still need to be masked?

[9:31:56 AM] Mike Petsche: I don't think so

[9:40:18 AM] Linda Lacelle: so is that a no? the drwg says to mask

[9:42:33 AM] Mike Petsche: I'm pretty sure we deviated them last time to nix the masking

[9:45:08 AM] Linda Lacelle: ok..thx

Mike Petsche